PATENT ABSTRACTS OF JAPAN

(11)Publication number :   2003-131749

(43)Date of publication of application :   09.05.2003

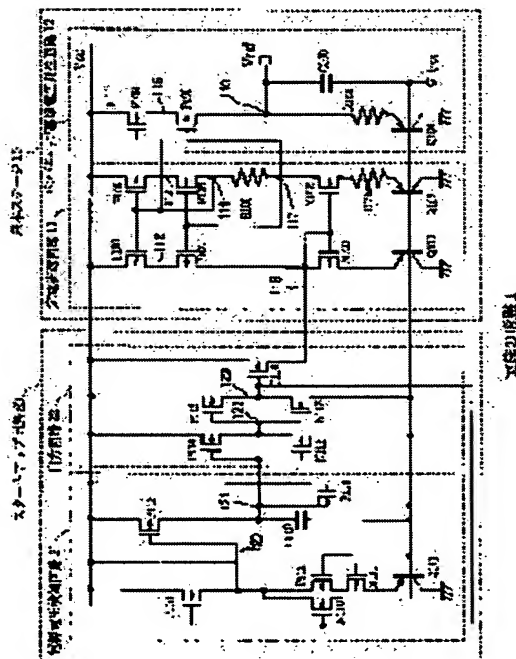(51)Int.Cl.   G05F   3/24

(21)Application number : 2001-328925   (71)Applicant :   OKI ELECTRIC IND CO LTD

(22)Date of filing :   26.10.2001   (72)Inventor :   SUGIMURA NAOAKI

(54) BANDGAP REFERENCE VOLTAGE CIRCUIT

(57)Abstract:

PROBLEM TO BE SOLVED: To generate bandgap reference voltage and to reduce power consumption by surely starting when supplying power.

SOLUTION: This bandgap reference voltage circuit is provided with a constant current source circuit 11 for generating constant current I1 proportional to thermal voltage, a bandgap reference voltage generation circuit 12 for generating bandgap reference voltage Vref from the constant current I1, a supply voltage detection circuit 21 having elements P111, P112, N111 and Q110 similar to elements P102, P106, N102 and Q100 which define the lower limit value of the voltage of high potential power supply Vcc by which the constant current source circuit 11 is operable and detecting whether the voltage of the high potential power supply Vcc amounts to the lower limit value, and an output circuit 20 which starts the constant current source circuit 11 by pulling up the node 118 of the constant current source circuit 11 since the voltage of the high potential power supply Vcc starts boosting until it amounts to the lower limit value and releases the starting when the voltage of the high potential power supply Vcc amounts to the lower limit value.

LEGAL STATUS

[Date of request for examination]   21.02.2002

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]   3678692

[Date of registration]   20.05.2005

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]